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Zigun Zhao

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EXAMINER

MINSKEY, JACOB T

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,877	Applicant(s) ZHAO, ZIGUN	
	Examiner JACOB T. MINSKEY	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The Examiner acknowledges the cancellation of claim 1-4 and the addition of new claims 5-24.
2. The previously presented 112 rejections are withdrawn due to the new claims.
3. Applicant's arguments with respect to claims 5-24 have been considered but are moot in view of the new ground(s) of rejection.
4. Applicant has presented a new claim set of claims 5-24, and presented arguments on the previously presented prior art. The majority of the arguments are focused on limitations that were not previously included in the claim language, and those arguments and limitations will be addressed in the following sections with the new grounds of rejection.
5. Applicant has additionally argued that the previously utilized prior art do not explicitly teach the use of the bamboo fibers in the textile industry. In response to applicant's arguments, the recitation of making clothing fabric has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). In the cases of the previously presented claims as well as the current claims, the method that

Art Unit: 1791

is claimed is simply one of preparing bamboo fibers for further processing. It does not matter what that further processing is, regardless of if it is for building materials or textile uses.

6. The new claims are addressed in the following sections.

Claim Objections

7. Claims 5-24 are objected to because of the following informalities:

8. Regarding claims 5 and 15, step (a) requires the bamboo segments to have an "equal" length. The instant specification describes the length of the sawed segments to be of a fixed length, but does not require them to be equal. It is the Examiner's opinion that one of ordinary skill in the art would have found it obvious to have the segments be equal in length for ease of the sawing operation. Because of this the Examiner is not considering the "equal" limitation to be new matter, but still is objection to the claim (and its dependents) because the phrasing is different between the claims and the specification.

9. Additionally, step (d) seems to be missing the word –temperature—after the first "predetermined."

10. Finally, it is unclear whether or not the "said soaking solution" in the steps is the same solution or simply solutions of the same composition of step (c). This is unclear because there are multiple containers (steam boiler and cooking pot) that contain the solution and multiple boiling steps all referring to "said soaking solution".

11. Appropriate correction is required.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 5-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rauer et al, EP 0971065 (A2) in view of Manahan, USP 2,026,584.

15. Regarding claims 5 and 15, Rauer teaches liberating bamboo fibers (see abstract) that comprises the steps of cleaning and chopping the bamboo into segments, washing the segments, then soaking them in a pressurized bath (1-10 bar at a temp of 100-180 degrees C) to soften the segments prior to a wash stage and then a multi-grinding stage to liberate the fibers into coarse fibers first and then fine fibers secondly and drying (see abstract).

Art Unit: 1791

16. Rauer does not explicitly teach the claimed cooking times for each successive cooking step, but does that after the course grinding, the fibers can be further washed and treated (see abstract).

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Rauer and to repeat the cooking process in order to fully remove the gum and other unwanted materials from the fibers prior to the final grinding operation as well as to optimize the time the fibers cook in order to produce fine fibers as the finished product. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the cook time of the softening stages, since it has been ordinary where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235).

18. In the same field of endeavor of liberating vegetable fibers, Manahan teaches a method making fabrics and textile yarns (column 1 lines 24-34) from vegetation with gummy or hard outer coverings (column 1). While Manahan does not explicitly state bamboo as one of materials, it would have been obvious to one of ordinary skill in the art that the process taught by Manahan would aide in the liberation of bamboo fibers due to the similar nature of the plants and desired properties of the end product.

19. Manahan teaches a process of first trimming and cutting the raw material into segments of uniform length (see figure 1 and column 2), followed by soaking the material in boiling water mixed with a natural tallow soap (column 2 lines 50-60), and then draining the soap water and adding hot water with softening agent (trisodium

Art Unit: 1791

phosphate (column 3 line 35). This process is repeated a number of times (see figure 1) before the final stage of applying a softener (see column 3) to the fibers before the drying and combing stages prior to further processing.

20. While Manahan does not teach the specific temperatures of cooking temperatures, he does teach that all hot water applications would be performed substantially at 212 F or boiling. Manahan does not teach the multiple compression or grinding stages to form fine bamboo fibers throughout the process.

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Manahan and Rauer by repeating the washing and softening process (as taught by Manahan) in the Rauer method between the multiple compression and grinding steps for the benefit of obtaining a final product that is free of all gum and unusable materials by treatment of environmentally safe natural additives to produce a final fiber that is soft and usable in the textile industry.

22. Regarding claims 6 and 16, Rauer further teaches that step (b) is done by a machine (see abstract).

23. Regarding claims 7 and 17, while Rauer does not explicitly say that the cutting of the bamboo segments is done by hand, he does teach cutting the segments (see above) and it would have been obvious to one of ordinary skill in the art at the time of the invention to simply substitute one known method of cutting (chopping station) with another (by hand) in order to obtain predictable results.

Art Unit: 1791

24. Regarding claims 8-14 and 18-24, Rauer and Manahan do not explicitly teach cooking the material in step (c) for 4 hours or that the softening agent is in a concentration of approximately 30% to water.

25. Rauer does teach adding additives to the bamboo in [0008 of the translation], but does not provide how much, and Manahan teaches a 5% solution and states that more can be utilized, but he does not foresee any major benefit gained with much of a higher concentration (column 2 line 58). One of ordinary skill in the art would perform routine experimentation to discover the optimum operation parameters of process steps that would have direct impacts on the physical characteristics of the final product (cook time, additive concentration, number of washing cycles, etc)

26. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the cook time and additive concentrations of the softening stages, since it has been ordinary where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges through routine experimentation involves only routine skill in the art (In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Rauer and to repeat the cooking process in order to fully remove the gum and other unwanted materials from the fibers prior to the final grinding operation as well as to optimize the time the fibers cook in order to produce fine fibers as the finished product.

Conclusion

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB T. MINSKEY whose telephone number is (571)270-7003. The examiner can normally be reached on Monday to Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTM

/Eric Hug/
Primary Examiner, Art Unit 1791